**WHAT IS CLAIMED IS:**

1. A digital portable terminal comprising:

an antenna for sending digital signals;

an input device for acquiring image information;

a frame memory for recording a decoded image of a reference frame;

a block matching section for estimating motion vectors and synthesizing a predicted image of a current frame by performing motion compensation between the decoded image of the reference frame and an input image of the current frame;

a DCT converter for performing DCT conversion of a difference between the input image of the current frame and the predicted image of the current frame to obtain DCT coefficients;

a quantizer for quantizing the DCT coefficients; and

a multiplexer for multiplexing information related to quantized DCT coefficients, the motion vectors and a rounding method used for pixel value interpolation in said motion compensation,

wherein said block matching section includes a rounding method determination unit which decides whether a positive rounding method or a negative rounding method is used for pixel value interpolation in said motion compensation,

wherein said synthesizing of the predicted image is performed using the decided rounding method and the motion vectors, and

wherein said antenna sends multiplexed coded information.

2. A digital portable terminal according to claim 1, wherein said input device for acquiring image information is a camera.

3. A digital signal processing apparatus comprising:

a camera for acquiring image information;

a frame memory for recording a decoded image of a reference frame;

a block matching section for estimating motion vectors and synthesizing a predicted image of a current frame by performing motion compensation between the decoded image of the reference frame and an input image of the current frame,

a DCT converter for performing DCT conversion of a difference between the input image of the current frame and the predicted image of the current frame to obtain DCT coefficients;

a quantizer for quantizing the DCT coefficients;

a multiplexer for multiplexing information related to quantized DCT coefficients, the motion vectors and a rounding method used for pixel value interpolation in said motion compensation; and

a memory for storing multiplexed information,

wherein said block matching section includes a rounding method determination unit which decides whether a positive rounding method or a negative rounding method is used for said pixel value interpolation in said motion compensation, and

wherein said synthesizing of the predicted image is performed using the decided rounding method and the motion vectors.

4. A digital portable terminal comprising:

an antenna for sending digital signals;

an input device for acquiring image information;

a monitor for displaying the image information;

a memory for recording a coding program,

a central processing unit (CPU) for executing the coding program, wherein the coding program comprises:

a code for estimating motion vectors by performing motion estimation between a decoded image of a reference frame and an input image of a current frame;

a code for deciding whether a positive rounding method or a negative rounding method is used for pixel value interpolation;

a code for synthesizing a predicted image of the current frame by using the decided rounding method and information related to the motion vectors;

a code for performing DCT conversion of a difference between the input image of the current frame and the predicted image to obtain DCT coefficients;

a code for quantizing converted DCT coefficients;

a code for multiplexing information related to quantized DCT coefficients, the motion vectors and the decided rounding method; and

a code for storing multiplexed coded information in the memory.

5. A digital portable terminal comprising:

an antenna for receiving coded information of images;

a demultiplexer for extracting motion vector information and quantized DCT coefficients;

an inverse quantizer for inverse-quantizing the quantized DCT coefficients to output DCT coefficients;

an inverse DCT converter for inverse-converting the DCT coefficients to output a differential image;

a synthesizer for synthesizing a prediction image by motion compensation using a positive rounding method and a negative rounding method for pixel value interpolation;

an adder for adding the differential image and the prediction image to output a decoded image; and

a monitor for displaying the decoded image.

6. A digital portable terminal comprising:

an antenna for receiving coded information of images;

a memory for recording the coded information;

a memory for recording a decoding program for the coded information;

a central processing unit (CPU) for executing the decoding program, wherein the decoding program comprises:

a code for extracting motion vector information, rounding method information, and information related to a differential image between a decoded image and a predicted image from the coded information,

a code for synthesizing the prediction image by motion compensation, and

a code for synthesizing a decoded image by adding the differential image obtained by an inverse transformation of the information related to the differential image to the predicted image,

wherein said rounding method information specifies one of two values, and one of the two values specifies a positive rounding method, and the other one of the two values specifies a negative rounding method, and a rounding method specified by said rounding information is used in said motion compensation.

7. A digital portable terminal according to claim 1, further comprising:

a decoder for reconstructing decoded images from digital signals received, via said antenna; and

a monitor for displaying the decoded image.

8. A digital portable terminal according to claim 7, wherein the input device for acquiring an input image is a camera.

9. A digital portable terminal according to claim 4, wherein the memory further records a decoding program for execution by the central processing unit (CPU), the decoding program comprising:

a code for extracting motion vector information, rounding method information and information related to a differential image between a decoded image and a predicted image from the coded information;

a code for synthesizing the prediction image by motion compensation; and

a code for synthesizing a decoded image by adding the differential image obtained by an inverse transformation of the information related to the differential image to the predicted image,

wherein said rounding method information specifies one of two values, and one of the two values specifies a positive rounding method, and the other one of the two values specifies a negative rounding method, and a rounding method specified by said rounding information is used in said motion compensation.

10. A digital portable terminal according to claim 9, wherein said input device for acquiring image information is a camera.

11. A digital portable terminal according to claim 1, wherein:

said positive rounding method is performed in accordance with the following equations:

Ib=[(La+Lb+1)/2] ; Ic=[(La+Lc+1)/2] ; Id=[(La+Lb+Lc+Ld+2)/4], and

said negative rounding method is performed in accordance with the following equations:

Ib=[(La+Lb)/2] ; Ic=[(La+Lc)/2] ; Id=[(La+Lb+Lc+Ld+1)/4],

where La is an intensity value of a first pixel in the decoded image, Lb is an intensity value of a second pixel in the decoded image which is horizontally adjacent to the first pixel, Lc is an intensity value of a third pixel in the decoded image which is vertically adjacent to the first pixel, and Ld is an intensity value of a fourth pixel in the decoded image which is vertically adjacent to the second pixel and horizontally adjacent to the third pixel, Ib is an interpolated intensity value at a midpoint between a position of the first pixel and a position of the second pixel, Ic is an interpolated intensity value at a midpoint between the position of the first pixel and a position of the third pixel, and Id is an interpolated intensity value of a midpoint between the position of the first pixel, the position of the second pixel, the position of the third pixel, and a position of the fourth pixel.

12. A digital signal processing apparatus according to claim 3, wherein:

said positive rounding method is performed in accordance with the following equations:

$Ib=[(La+Lb+1)/2]$ ; $Ic=[(La+Lc+1)/2]$ ; $Id=[(La+Lb+Lc+Ld+2)/4]$, and

said negative rounding method is performed in accordance with the following equations:

$Ib=[(La+Lb)/2]$ ; $Ic=[(La+Lc)/2]$ ; $Id=[(La+Lb+Lc+Ld+1)/4]$,

where La is an intensity value of a first pixel in the decoded image, Lb is an intensity value of a second pixel in the decoded image which is horizontally adjacent to the first pixel, Lc is an intensity value of a third pixel in the decoded image which is vertically adjacent to the first pixel, and Ld is an intensity value of a fourth pixel in the decoded image which is vertically adjacent to the second pixel and horizontally adjacent to the third pixel, Ib is an interpolated intensity value at a midpoint between a position of the first pixel and a position of the second pixel, Ic is an interpolated intensity value at a midpoint between the position of the first pixel and a position of the third pixel, and Id is an interpolated intensity value of a midpoint between the position of the first pixel, the position of the second pixel, the position of the third pixel, and a position of the fourth pixel.

13. A digital portable terminal according to claim 4, wherein:

said positive rounding method is performed in accordance with the following equations:

$Ib=[(La+Lb+1)/2]$ ; $Ic=[(La+Lc+1)/2]$ ; $Id=[(La+Lb+Lc+Ld+2)/4]$, and

said negative rounding method is performed in accordance with the following equations:

Ib=[(La+Lb)/2] ; Ic=[(La+Lc)/2] ; Id=[(La+Lb+Lc+Ld+1)/4],

where La is an intensity value of a first pixel in the decoded image, Lb is an intensity value of a second pixel in the decoded image which is horizontally adjacent to the first pixel, Lc is an intensity value of a third pixel in the decoded image which is vertically adjacent to the first pixel, and Ld is an intensity value of a fourth pixel in the decoded image which is vertically adjacent to the second pixel and horizontally adjacent to the third pixel, Ib is an interpolated intensity value at a midpoint between a position of the first pixel and a position of the second pixel, Ic is an interpolated intensity value at a midpoint between the position of the first pixel and a position of the third pixel, and Id is an interpolated intensity value of a midpoint between the position of the first pixel, the position of the second pixel, the position of the third pixel, and a position of the fourth pixel.